DOCUMENT RESUME

ED 482 862 PS 031 701

TITLE	Measuring School Readiness: How Do We Know When We're on Track?
INSTITUTION	Children's Action Alliance, Phoenix, AZ.
SPONS AGENCY	David and Lucile Packard Foundation, Los Altos, CA.; Ford Foundation, New York, NY.
PUB DATE	2003-00-00
NOTE	10p.
AVAILABLE FROM	Children's Action Alliance, 4001 N. 3rd Street, Suite 160, Phoenix, AZ 85012. Tel: 602-266-0707; Fax: 602-263-8792; Web site: http://www.azchildren.org. For full text: http://www.azchildren.org/caa/_mainpages/publications/_measuring_readiness.pdf.
PUB TYPE	Reports - Descriptive (141)
EDRS PRICE	EDRS Price MF01/PC01 Plus Postage.
DESCRIPTORS	Accreditation (Institutions); At Risk Persons; *Benchmarking; Child Caregivers; *Educational Indicators; Elementary School Students; Enrollment; Learning Readiness; Measurement Techniques; *Outcomes of Education; Poverty; Preschool Children; *Preschool Education; Preschool Teachers; Reading Achievement; *School Readiness; Social Indicators; Special Education; Student Placement; Teacher Salaries
IDENTIFIERS	*Arizona; *Indicators; Project Head Start; Risk Factors

ABSTRACT

In Arizona and around the country, there is an increased focus on ensuring that children start school ready to learn. Noting that the best way to know if Arizona's children are starting school ready to learn is to track their progress, this booklet details indicators or benchmarks in five categories used to measure the state's progress in school readiness efforts: (1) reading at grade level, based on standardized testing at third and fourth grades; (2) risk factors (young child poverty rates, children born into families with multiple risk factors, percent of first-graders in special education, and student mobility); (3) access to services (percent of poor 3- and 4-year-olds enrolled in Head Start, percent of low-income children under age 6 without health insurance, lack of adequate prenatal care, and percent of low-income children receiving assistance through Special Supplemental Nutrition Program for Women, Infants, and Children [WIC]); (4) quality of early education (child care providers' salaries relative to kindergarten teachers' salaries, preschool teachers' salaries relative to kindergarten teachers' salaries, and percent of licensed child care centers that are NAEYC accredited); and (5) readiness of schools (percent of fourth-graders in classes with 25 or fewer children). The indicator data show that the state's reading achievement scores remained stable between 1992 and 2002 but lagged behind the national average. About 20 percent of Arizona's children under age 5 currently live in poverty. About 8 percent of first-graders are placed in special education classes. Almost 60 percent of poor 3- and 4-year-olds are enrolled in Head Start. About one-third of Arizona's low-income children under age 6 lack health insurance. In Arizona, the salaries of child care providers and preschool teachers are a fraction of kindergarten teacher salaries. Slightly over 10 percent of licensed child care centers in the

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state are accredited through NAEYC. About half of Arizona's fourth-graders are in classes with 25 or fewer children, compared to 64 percent nationally. (KB)

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ED 482 862

Measuring School Readiness:

How do we know when we're on track?

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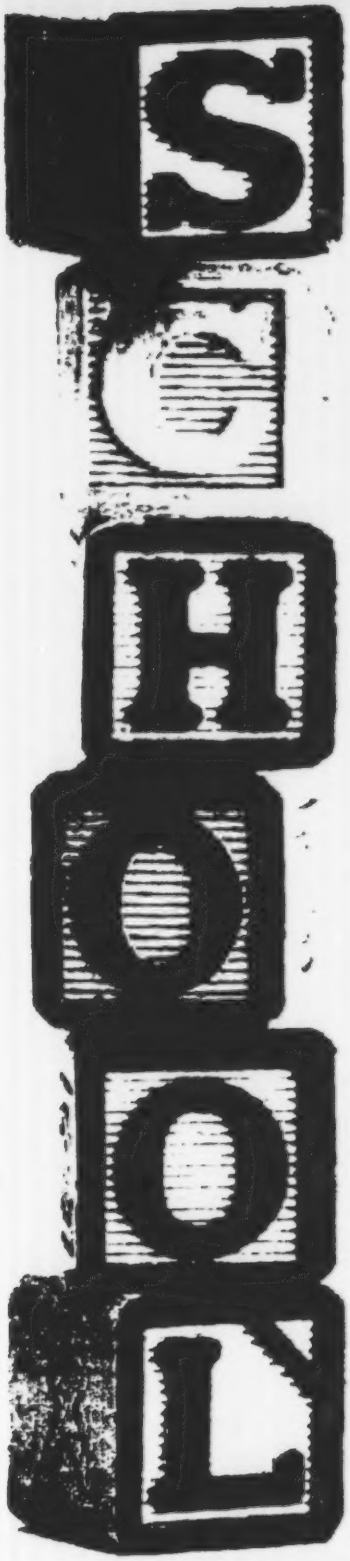

Today, in Arizona and around the country, there is an increased focus on ensuring that children start school ready to learn. And for good reason: when children build a good educational foundation they are more likely to succeed in school.

The best way to know if Arizona's children are starting school ready to learn is to track their progress. One of the most important early learning outcomes children can achieve is to be proficient readers. Increasingly, government and school officials are looking toward third and fourth grade reading scores as indications of our success in preparing children to learn and as indications of the educational outcomes that can be expected in future years. But if we wait until third grade to measure progress, it is very hard to help children catch up. It is much better to identify the factors for *very young children* that influence their ability to read in later years.

The indicators presented here in five categories are key benchmarks that, combined, measure our progress in school readiness. These indicators can help bring together joint efforts among elected leaders, the State School Readiness Board, policymakers and state officials, child care and preschool teachers, parents, employers, and schools to talk about how to improve school readiness. The next step will be to choose and pursue action strategies that move us toward our goal that every child in Arizona start school ready to learn.

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Indicators of School Readiness

Outcomes

Reading at Grade Level — being a good reader in the early grades is one of the strongest predictors of later success in school. Research suggests that students who fail to read at grade level by the 4th grade have a higher likelihood of dropping out of school.[1] Educators note that being able to read at grade level is critical by the fourth grade because that is when teaching and learning styles begin to shift. In the early grades, children are learning to read; after fourth grade they are reading to learn. In the later grades, educational success depends, to a large extent, on how well students can read.

The table below displays reading scores using the National Assessment of Educational Progress (NAEP) in 4th grade as well as Arizona's AIMS reading exams in 3rd grade. The AIMS test is only taken in Arizona and was first implemented in 2000; the results can help us see how we measure up to our own standards and how much we improve in the future. Arizona's NAEP scores remained stable between 1992 and 2002, but lag behind the national average. Both tests show that large numbers of children fall below basic reading standards. Nearly half of Arizona's 4th graders scored below basic reading levels on the NAEP in 2002, and one in four 3rd graders failed to meet Arizona's own reading standards.

	Arizona		National	
Outcomes	Early Year	Recent Year	Early Year	Recent Year
NAEP 4th grade reading[2]	**1992** 46% below basic level 33% basic level 18% proficient level 3% advanced level	**2002** 49% below basic level 29% basic level 17% proficient level 4% advanced level	**1992** 38% below basic level 34% basic level 22% proficient level 6% advanced level	**2002** 38% below basic level 32% basic level 23% proficient level 6% advanced level
AIMS 3rd grade reading	**Spring 2000** 12% fell far below the standard 18% approached the standard 46% met the standard 25% exceeded the standard	**Spring 2002** 9% fell far below the standard 17% approached the standard 45% met the standard 29% exceeded the standard	Not applicable	Not applicable

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Indicators of School Readiness

Risk Factors

Poverty — children who grow up in poor families are at greater risk than their non-poor peers of not being ready academically. For example, poor children are 1.5 times as likely to have a developmental delay or learning disability, twice as likely to repeat a grade, and more than twice as likely to drop out of school.[3,4] In 2002, 1 in 5 Arizona children under age 5 lived in poverty and faced these elevated risks.

New Babies at Risk — children born into families with multiple risk factors face a far greater chance of educational failure than their peers. Babies at risk have at least two of these risk factors when they're born: their mother is a teenager, their mother is unmarried, their mother has less than 12 years of schooling, the birth was paid for by AHCCCS health coverage (indicating very low family income). In 2002, more than one out of four babies born in Arizona faced at least two of these risks, an improvement since 1990.

Special Education — children placed in special education classes in the early grades either have an identified learning disability or a physical or emotional disability that requires them to receive special services. Because of their special needs, these children may be at risk for not reading at grade level. Between 1998 and 2002, Arizona's rate of 1st graders placed in special education has remained fairly constant.

Student Mobility — students move in and out of schools for a variety of reasons. For some students, the move can represent a positive change in their school or home environment. For others, especially low-income and at-risk students, frequent changes in schools can mean disruptions linked with a host of problems, including reading below-grade level and being retained a grade.[5] In 2002, 13% of Arizona's 3rd grade children changed schools during the school year.

	Arizona		National	
Risks	Early Year	Recent Year	Early Year	Recent Year
Children under age 5 in poverty	**1990** 30%	**2002** 21%	**1990** 20%	**2002** 18%
New babies at risk[6]	**1990** 33%	**2002** 29%	No national source	No national source
% of 1st graders in special education	**1998** 7%	**2002** 8%	No national source	No national source
% of 3rd graders who changed schools[7]	**1998** 12%	**2002** 13%	No national source	No national source

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Indicators of School Readiness

Access to Services

Early Childhood Programs — quality preschool and child care programs help children grow and learn, especially children who face family problems. A whole field of research has shown that participation in these programs can lead to increased cognitive ability and lower rates of being held back in school.[8] Research on Head Start includes 50 studies that provide evidence of immediate improvements in children's intellectual and socio-emotional development.[9] Nearly 6 out of ten poor three- and four-year-old children in Arizona were enrolled in Head Start in 2002. While some children participated in other preschool programs, thousands of low-income children are left behind.

Health Programs — early physical and mental health are important ingredients to starting school ready to succeed. Children who lack health insurance are more likely to suffer from routine, preventable illnesses. And poor health can affect school performance. Lack of prenatal care has been linked to poor health outcomes, including developmental delays. Such health problems are also linked with poor educational outcomes.[10] In 1998-2000, nearly one in three of Arizona's low-income children under age six was uninsured. This is much higher than the national average. The percent of babies born to mothers without adequate prenatal care improved significantly in Arizona during the 1990s, but remained much higher than the national rate.

Nutrition Programs — poor nutrition has been found to affect children's physical and intellectual development. The Special Supplemental Nutrition Program for Women, Infants and Children, known as WIC, has been effective in improving young children's nutrition.[11] In addition, a five-year national evaluation of this program found that young children whose mothers had participated in WIC scored significantly higher on vocabulary tests than children whose mothers did not participate in WIC.[12] In 2002, fewer than two out of three eligible low-income children received WIC services in Arizona, significantly below the national participation rate.

	Arizona		National	
Access	Early Year	Recent Year	Early Year	Recent Year
% of poor 3 and 4 yr. olds enrolled in Head Start[13]	**2000** 60%	**2002** 59%	**2000** 54%	**2002** 60%
% of low-income children under age 6 without health insurance	Not available	**1998-2000** 33%	Not available	**1998-2000** 21%
Lack of adequate prenatal care[14]	**1990** 10%	**2000** 7%	**1990** 6%	**2000** 4%
% of low-income children receiving WIC	**1990** 33%	**2002** 65%	Not available	**2002** 80%

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Indicators of School Readiness

Quality of Early Education

Early Childhood Teacher Salary — the quality of child care and preschool programs sets the groundwork for learning that takes place when children arrive at the school house door. When early childhood teachers do not earn competitive salaries, it is difficult to attract the best educated and most capable teachers and many child care centers and preschool programs suffer from high rates of teacher turnover. All of these factors undermine the quality of early childhood teaching. The premier research study on child care quality found that teachers' wages were the second most important determinant of program quality – with the first being child-teacher ratios.[15] In Arizona, and across the nation, early childhood teachers earn a fraction of Kindergarten teacher salaries.

National Accreditation of Early Childhood Programs — to obtain national accreditation, early childhood programs must meet specific quality standards such as low child-teacher ratios, increased teacher training, improved facilities, and formalized management procedures. Research on the National Association for the Education of Young Children (NAEYC) accreditation found that achieving accreditation has improved the quality of environments for young children.[16] In 2002, only one out of eight licensed child care centers in Arizona was accredited by NAEYC. This is higher than the national average of one out of every 14 child care centers.

	Arizona		National	
Quality	Early Year	Recent Year	Early Year	Recent Year
Child care providers' salary relative to Kindergarten teachers' salary	**1999** 41%	**2001** 42%	**1999** 42%	**2001** 41%
Preschool teachers' salary relative to Kindergarten teachers' salary	**1999** 46%	**2001** 57%	**1999** 53%	**2001** 51%
% of licensed child care centers that are NAEYC accredited	Not available	**2002** 12%	Not available	**2002** 7%

Indicators of School Readiness

Readiness of Schools

Class Size — To promote school success, schools have to be ready to teach students in addition to students being ready for school. Research shows that children who are in smaller classes in the early grades academically outperform their peers in reading and math exams. These results are magnified for low-income and minority students.[17] By having fewer students in the classroom, teachers have the time to identify learning difficulties before they blossom into real problems and work one-on-one with students to address those issues. In 1998, fewer than half of Arizona's 4th graders were in small classes (those with 25 or fewer children). This compares to 64% nationally.

	Arizona		National	
Readiness of Schools	Early Year	Recent Year	Early Year	Recent Year
% of 4th graders in classes with 25 or fewer children	**1996** 45%	**1998** 49%	**1996** 60%	**1998** 64%

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We gratefully acknowledge

The **BHHS Legacy Foundation** for support of this publication and the **David and Lucile Packard Foundation** and the **Ford Foundation** for support of the School Readiness Indicators Project.

Special thanks to
Superintendent of Public Instruction, Tom Horne, for leadership of the Arizona School Readiness Indicators Team.

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AIMS: Arizona Department of Education
Children in Poverty: U.S. Bureau of Census, current population survey
New Babies at Risk: Arizona Department of Health Services
Special Education: Arizona Department of Education
Mobility: Arizona Department of Education
Head Start: U.S. Head Start Bureau
Lack of Health Insurance: National Center for Children in Poverty
Lack of Adequate Prenatal Care: Annie E. Casey Foundation
Women, Infants, and Children: U.S. Department of Agriculture, Women, Infants and Children Program
Early Childhood Instructor Salaries: Bureau of Labor Statistics, National Occupational Survey
National Accreditation: Children's Defense Fund
Class Size: National Assessment of Educational Progress

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Endnotes

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EFF-089 (1/2003)

PS 031701